

IN THE SPECIFICATION:

Please amend the specification as follows:

On page 11, please amend the paragraph beginning on line 15 as follows:

The adaptive equalizer 45 comprises a filter 451 and tap coefficient controller 452. The iterative decoder 46 comprises a plurality of (e.g. three) decoder units 460-1, 460-2 and 460-3, and RLL code decoder 465. The input of the RLL code decoder 465 is connected to the output of the last-stage decoder unit 460-3. The decoder units 460-1 and 460-2 comprise soft-decision Viterbi detectors 461-1 and 461-2, de-interleavers 462-1 and 462-2, outer code decoders 463-1 and 463-2 and interleavers 464-1 and 464-2, respectively. On the other hand, the decoder unit 460-3 comprises a soft ~~sift~~-decision Viterbi detector 461-3, de-interleaver 462-3 and outer code decoder 463-3.

On page 19, please amend the paragraph beginning on line 6 as follows:

The gain of the variable gain amplifier 41 (the signal amplitude adjusted by the variable gain amplifier 41) is feedback-controlled by the automatic gain controller 47. The compensation by the offset compensator 43 (the signal offset compensated by the compensator 43) is feedback-controlled by the offset controller 48. The timing of the sampling clock ADC_CLK used in the A/D converter 44 is feedback-controlled by the timing recovery controller 49. The equalization characteristic of the FIR ~~filer~~ filter 451 is feedback-controlled by the tap coefficient controller 452. In other words, the tap coefficient controller 452 functions as an equalization characteristic controller for feedback-controlling the equalization characteristic of the FIR ~~filer~~ 451. For this feedback control, soft-decision values generated by the iterative decoder 46 are utilized. The automatic gain controller 47, offset controller 48, timing recovery controller 49 and tap coefficient controller 452 each contain a PR waveform generator 400, described later, which generates a digital value sequence (PR value sequence) of a PR waveform (reference PR waveform) expected from the soft-decision values.

On page 23, please amend the paragraph beginning on line 23 as follows:

The PR waveform generator 400 generates ~~s~~ a digital value sequence of an expected PR equalization waveform (i.e., an expected PR value sequence) from the output from the soft-decision Viterbi detector 461-1 of the decoder unit 460-1. The PR waveform generator

400 also generates a flag (reliability flag) F. The flag F indicates whether the reliability of each value of the PR value sequence generated by the PR waveform generator 400 is high (F = "1") or low (F = "0"). As will be described later, an error detector 482 (see FIG. 9) incorporated in the offset controller 48, a phase comparator 492 (see FIG. 11) incorporated in the timing recovery controller 49, and an error detector 453 (see FIG. 13) incorporated in the tap coefficient controller 452 also incorporate respective PR waveform generators 400 similar to the above-mentioned generator 400.